

Innovative Technology Transfer Partnership (ITTP)



Success Story

TITLE

Description of Innovation

Engineers at Kennedy Space Center have developed a Standing Wave Reflectometer (SWR's). NASA's reflectometer was developed to provide a reliable, portable instrument to verify the condition of electrical power and signal distribution systems inside the Space Shuttle orbiters. Exclusive patent rights have been granted to Eclipse International, a leading provider of Automatic Test Equipment (ATE) and associated test application software solutions for commercial and military organizations worldwide.



Eclypes' Commercial Cable Tester

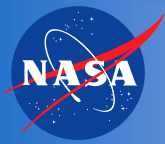
Model ESP

Value Back to NASA

Eclipse has developed multiple configurations of the Model ESP SWR fault location meters that provide a reliable, hand-held instrument to verify the location of a "hard fault" down paths of electrical power and signal distribution sub-systems that reside inside complex vehicle systems. NASA's engineer's currently use the SWR to test systems and detect broken wires and insulation failures.

Commercial Benefits

The Model ESP SWR is being used for Impedance Spectroscopy techniques that the Federal Aviation Administration (FAA) funds and has been very successful in today's market. Customers include FAA certified repair facilities, commercial aircraft manufacturers and operators, and U.S. and NATO military agencies. The Department of Energy, rail operators, elevator maintenance firms and many others also have this technology to aid in locating faults quickly and accurately with tremendous savings. The Component Maintenance Squadron at Seymour Johnson Air Force Base recently combined the product with customized software to locate aircraft wiring problems in three minutes as compared to 20 plus hours sometimes needed in the past. Master Sgt. Stephen Hoggard said the tester saves massive amounts of manpower and numerous hours of aircraft downtime.



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Partnership Contributions

Eclipse developed multiple configurations of the Model ESP SWR fault location meters that provide a reliable, hand-held instrument to verify the location of a “hard fault” down paths of electrical power and signal distribution sub-systems that reside inside complex vehicle systems. The initial production, handheld, battery powered test sets made preliminary market entry in the last quarter of 2001 for beta testing, and have a specified range of 1,000 feet and fault location accuracy of 0.75 percent.

ITTP Role

The Technology Transfer Office at Kennedy Space Center partnered with Research Triangle Institute and the Southeast Regional Technology Transfer Center at the University of Florida to market this technology. An Industry Briefing was held at the Kennedy Space Center to demonstrate this technology manufacturers of electronic test equipment. Each industry participant submitted a license application that consisted of a developmental and market application plan. Eclipse International Corporation was awarded an exclusive license for the SWR technology under Patent # 5,977,773. NASA’s Licensing Manager, David Makufka worked with innovator Pedro Medelius on securing the license with Eclipse.

Other References, Sources

www.eclipse.org

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